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COMMENTARY

Monetary vs. Non-Monetary Incentives for Program Participation

An Experiment with Free Middle School Tutoring

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One of the less prominent provisions of No Child Left Behind (NCLB) was one that set aside funds to allow low-income students in low-performing schools free access to tutoring, termed Supplemental Education Services (SEdS). While estimates of SEdS benefits for students have varied by location and provider one finding has been consistent—low attendance. In a recent randomized experiment, researchers at the National Center for Performance Incentives at Vanderbilt University's Peabody College of Education and Human Development set out to test whether eligible students would attend more regularly for money or praise.

We randomly selected 300 SEdS-eligible 5^{th}-8^{th} grade students in a large Southern urban school district, where prior estimates of SEdS effectiveness indicated the tutoring services were relatively high quality. We then Participants randomly assigned students to one of three groups:

- A reward of $100 (distributed via an online platform) for consistent attendance;
- Certificates of recognition, signed by the school's district superintendent, mailed to the student's home for consistent attendance,
- A control group, which received no experimental incentives.

The students who were offered up to $100 for regular attendance were no more likely to attend sessions than if they were offered nothing at all. Alternatively, when we offered students and their parents a certificate for attending tutoring sessions regularly, the differences were dramatic. The certificate group attended about 40 percent more of their tutoring hours than those in the control group.

Prior studies demonstrated that paying students (Fryer) and teachers (Springer) for higher test scores is ineffective. One explanation is that teachers and students lack the knowledge or support they need to improve test scores, nullifying the incentive placed before them. In other words, you can offer a man more money to catch more fish, but if you don't help him improve his fishing skills, he might not be able to increase his yield.

In this study, our goal was different. We offered the man money to go to the lake every day, but when he got there, there was someone there to help him improve his fishing skills. In other words, we attempted to incentivize middle school students to attend tutoring regularly, where they were given additional support in reading and math.

The inability to complete the incentivized task should be of minimal concern, therefore, particularly given the success of the students offered certificates.

Policymakers and practitioners seeking to increase attendance of underutilized student supports should note the cost-effectiveness of the certificate intervention. The certificate intervention cost approximately $9 per student completing 100 percent of allocated hours. For the monetary intervention it cost between $100 per student completing 100 percent of the allocated hours (not accounting for postage, online delivery system, etc.). If we compute the cost required to obtain a single unit of effectiveness, we find the certificate intervention is more than 6,000 times more cost-effective than the monetary incentive. While these rough estimates paint a relatively extreme picture, they illustrate an important element of our primary finding: non-monetary incentives can be both effective and cheap and provide students a nudge toward greater success.

Even so, the results of this experiment do not offer a comprehensive answer to an ongoing problem. Offering certificates of recognition to motivate all desirable student behavior would not necessarily have the same effects if implemented in a widespread and sustained manner. Economic theory suggests that the value ascribed to a certificate of recognition would likely have diminishing marginal utility. Even in this study, we would imagine that the second certificate of recognition would not have the same impact as the first. Relatedly, a certificate of recognition might not have the same value for a student who consistently brings home high-GPA report cards, compared to a student who brings home low-GPA report cards. Ultimately, implementation of non-monetary incentives would be most effective if it takes into consideration the likelihood that these kinds of incentives may have diminishing marginal returns.

Among a recent series of disappointing student incentive experiments, the results of this study should inspire measured optimism. In essence, we find that incentives can effectively increase participation in voluntary SEdS, and their costs can be low. The surprising dominance of the non-monetary incentive over relatively substantial monetary rewards highlights the need for more nuanced research that looks at the differential effectiveness of the various types of incentives we can offer. Furthermore, the strong causal estimates of effectiveness for non-monetary incentives coupled with their low implementation costs suggests policymakers and practitioners should look to motivate participation in underutilized, potentially beneficial programs through these types of incentives.

The full study is in Matthew G. Springer, Brooks Rosenquist & Walker A. Swain , Monetary and Non-Monetary Student Incentives for Tutoring Services: A Randomized Controlled Trial, Journal of Research on Educational Effectiveness, forthcoming.

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